A Static and Dynamic Distributive Model of the Effects of Immigration

Benefits, costs, net balance and social replacement by native class

Xema Gatnau

Abstract

This paper proposes an economic and essayistic model to represent the distributive effects of immigration by native social class. The starting thesis is that the effects should not be assessed only in aggregate terms — such as GDP — but above all in distributive terms: who captures the benefits, who bears the costs, and how that balance evolves over time.

The first part develops a static model: it defines variables, positive channels and negative channels, and represents a differentiated net balance by income level. The second part adds a temporal dimension: it shows that an initial gain for certain elites may erode in the medium and long run if the process becomes massive, persistent and substitutive.

1. Introduction and scope of the model

Public discussion on immigration often oscillates between two simplifications: either immigration is said to be good for "the economy" in general, or it is presented as a generalized cost. This document starts from a different hypothesis: immigration does not have a single social effect, but rather an unequal distribution of benefits and costs across classes, sectors, types of immigration and temporal phases of the process.

For that reason, the paper distinguishes between a static model — a snapshot of the initial moment — and a dynamic model — a temporal trajectory of the same phenomenon. The first indicates who tends to win or lose at the beginning; the second shows how that balance may change as the intensity of the phenomenon, the persistence of the flow and the possibility of social replacement increase.

2. Methodological note and limits

The model is conceptual and comparative. It does not assume that all channels operate at all times or with the same intensity. Actual magnitudes depend on factors such as the type of immigration, skill level, employment rate, housing-supply elasticity, the generosity of the welfare state, spatial segregation, integration capacity and institutional strength.

The purpose is not to moralize about concrete persons, but to analyse a distributive architecture: which social group captures private advantages and which social group assumes material, fiscal or systemic costs.

3. Part I — Static distributive model

The static model describes the distributive balance at an initial moment. For each native social class c, a net migratory balance SMC_c = B_c − C_c is defined, where B_c represents the benefits captured by that class and C_c the costs it bears.

The intuition is straightforward: popular classes tend to capture few direct benefits and bear many immediate costs; certain upper classes or rentier groups may capture relevant benefits while externalizing part of the costs.

4. Basic variables of the model

Variable	Definition	Interpretation
B_c	Benefits captured by class c.	Income, rents, cost savings or market advantages.
C_c	Costs borne by class c.	Wage losses, housing pressure, taxation, service saturation or instability.
SMC_c	Net migratory balance of class c.	Initial distributive result by class.
t	Time.	Allows the transition from the static to the dynamic model.
I	Intensity of the migratory process.	Relative magnitude of the flow and its entrenchment.
R	Degree of replacement.	Capacity of the process to occupy economic, social or institutional positions.
E	Institutional elasticity.	Capacity of the state and infrastructures to absorb the process without collapse.

5. Main positive channels

Channel	Who mainly captures or suffers it	Mechanism
P1. Cheaper labour	Labour-intensive firms, service sectors and platforms.	Lower wage costs and greater operational flexibility.
P2. Higher demand	Firms, retailers, property owners and partly the state.	More aggregate consumption and more economic activity.
P3. Real-estate rents	Landlords and rentier groups.	Higher demand for housing and commercial premises.
P4. Cheaper personal services	Upper-middle and upper classes.	Care work, hospitality, logistics and domestic services become cheaper.
P5. Taxes and contributions	Public sector and pension system, if employment is effective.	Positive fiscal contribution when employment is stable and sufficient.
P6. Commercial dynamism	Some neighbourhoods, sectors and commercial chains.	New businesses, longer opening hours and faster turnover.
P7. Demographic renewal	Aggregate economy under low-fertility scenarios.	Short-term increase in the active population.

6. Main negative channels

Channel	Who mainly captures or suffers it	Mechanism
N1. Wage pressure	Low- and medium-skilled native workers.	Labour competition and greater employer substitution power.
N2. Housing pressure	Renters, young adults and popular classes.	More demand in the affordable segment and in strained neighbourhoods.
N3. Pressure on public services	Intensive users of health, schooling and social services.	Demand grows faster than institutional supply.
N4. Competition for transfers	Poor natives and poor immigrants simultaneously.	Rationing, queues and stricter selection.
N5. Degradation or transformation of environments	Residents with low relocation capacity.	Rapid changes in neighbourhoods, spaces and social uses.
N6. Net fiscal cost	Net taxpayers if the fiscal balance is negative.	More public spending without sufficient fiscal return.
N7. Replacement of positions	Middle classes, petty bourgeoisies and, eventually, local elites.	New economic and professional groups may displace existing positions.
N8. Systemic instability	The system as a whole in the long term.	Institutional tension, fragmentation and cumulative distributive conflict.

7. Simplified matrix of the balance by native social class

Class	Benefit capture	Exposure to costs	Expected balance
Native lower classes	Very low	Very high	Strongly negative
Working class	Low	High	Negative
Lower-middle classes	Low or moderate	High	Negative or ambiguous
Property-owning middle classes	Moderate	Medium	Ambiguous
Upper-middle classes	Moderate or high	Low or medium	Ambiguous or slightly positive
Business upper class	High	Low or medium	Positive in the short term
Rentier / real-estate class	Very high	Low	Strongly positive in the short term
Local elites dependent on stability	High in the short term	Increasing in the long term	From positive to ambiguous or negative

8. Matrix by type of immigration

Type of immigration	Likely effect on native popular classes	Likely effect on elites
High-skilled and high-income	More neutral or only slightly negative	Positive for taxation and advanced sectors

Type of immigration	Likely effect on native popular classes	Likely effect on elites
Low-income labour immigration	Negative because of wages, housing and services	Positive for firms and property owners
Non-working or fiscally deficit	Strongly negative	Ambiguous or negative, except for very specific sectors
Entrepreneurial or capitalized	May be neutral or positive	Positive for investment and business networks
Massive unplanned immigration	Very strongly negative	Positive at first, but potentially negative in the long run

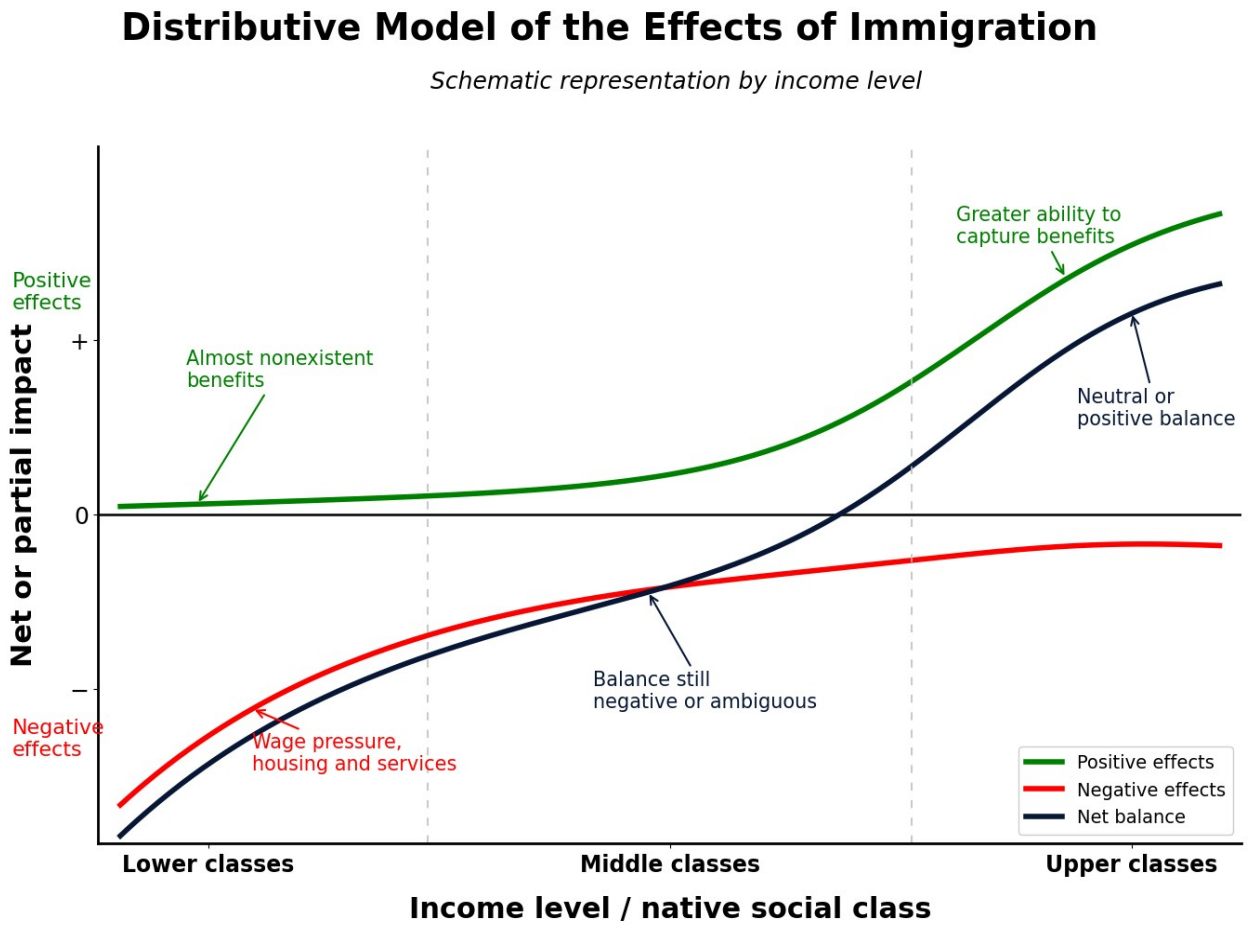

Figure 1. Schematic representation of the initial distributive balance by income level.

9. Reading the static figure

The green curve represents positive effects: among lower classes they are almost nonexistent, and they increase gradually as income, wealth and the ability to convert the phenomenon into private gain rise. The red curve represents negative effects: they are very intense among lower classes, are partly attenuated among middle classes, and move closer to zero among upper classes.

The blue curve is the net balance. It starts strongly negative among popular classes, remains negative or ambiguous among middle classes, and only tends toward neutral or positive values among upper classes. The model does not claim that every upper-class group always gains, but rather that its average ability to capture benefits is larger.

9.1. Simplified graphical representation

Before introducing time, the same mechanism can be condensed into a very simple conceptual scheme: the balance tends to rise with income and wealth because the capacity to capture benefits increases while direct exposure to costs declines.

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Net immigration balance
^
|                          upper classes / capital
|                               /
|                              /
|                   upper-middle classes
|                              /
|-------------------------/------------------> income / wealth
|                        /
|       lower-middle classes
|            /
| working class
| lower class
|
v
Negative balance
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The curve rises with income and wealth because the capacity to capture benefits increases: property, capital, firms, cheaper services, real-estate rents, the ability to move to another neighbourhood, private schooling, private healthcare and, more generally, more instruments with which to privatize gains and externalize part of the costs.

9.2. Stronger theoretical formulation

> The effects of immigration are distributive rather than merely aggregate. GDP may rise while the material welfare of native working classes declines. This occurs when the benefits of immigration — higher demand, abundant labour, real-estate rents and market expansion— are captured mainly by capital and property owners, while the costs —wage pressure, residential competition, saturation of public services and neighbourhood transformation— are borne mainly by native lower and lower-middle classes.
>
> Immigration does not divide society only between “natives” and “immigrants”, but also between classes that capture the benefits of human mobility and classes that bear its immediate material costs.

This formulation supports a class thesis: attitudes toward immigration are not only moral, ideological or identity-based; they may also reflect a material position. Popular classes may be more sensitive to costs not because they are necessarily more hostile, but because they have less capacity to escape them and fewer opportunities to transform them into benefits.

9.3. From the static snapshot to the temporal trajectory

The first image represents the initial impact of immigration according to the income level of the native population. It is a short-term representation: at a given moment, native lower and working classes bear many costs and capture few benefits, while certain upper classes may capture initial benefits —cheaper labour, higher demand, higher real-estate rents, more consumption and a greater ability to externalize costs.

But this model is still incomplete because it does not incorporate time. A dynamic representation must add that the effects are not stable: what initially benefits certain elites may eventually erode their position as well if the migratory process becomes massive, persistent and substitutive.

10. Part II — From the static to the dynamic model

The static model is necessary, but insufficient. Time must be added. For each class c and moment t, the balance becomes SMC_(c,t) = B_(c,t) − C_(c,t). The key point is that B and C are not constants: they change when the magnitude of the flow, its persistence and its capacity for reproduction or replacement change.

In the short term, certain upper classes may benefit from more abundant labour, larger demand and higher real-estate rents. In the long term, however, the same dynamic may erode those gains if it increases the replacement of positions, institutional tension or systemic instability.

10.1. The dynamic thesis

The dynamic thesis can be stated explicitly as follows:

> *In the short term, immigration may generate an asymmetric distribution of benefits and costs: native lower classes tend to bear the immediate costs, while certain elites may capture benefits. In the long term, however, if the process becomes massive, persistent and substitutive, those benefits may also erode for upper classes, because social replacement, pressure on institutions, competition among elites and systemic instability may eventually cancel out the initial gain.*

Put more plainly:

> *Capital may initially benefit from abundant immigration, but if the process alters too deeply the social structure that made that capital possible —cohesion, stability, legal certainty, the domestic market, institutional trust, cultural continuity and the reproduction of local ruling classes— the initial private benefit may turn into a final systemic cost.*

11. The 4D model: class, balance, time and intensity

- Dimension 1 — Native social class: lower, middle and upper classes.
- Dimension 2 — Net balance: positive, neutral or negative according to the relation between benefits and costs.
- Dimension 3 — Time: short, medium and long term.
- Dimension 4 — Intensity: visually represented through colour; it indicates the strength of the balance as well as the magnitude of the process and its deterioration.

12. The four phases of the dynamic process

Phase 1. Initial selective benefit. Lower classes display a strongly negative balance. Certain owners, labour-intensive firms or service sectors may capture initial gains.

At the initial stage, native lower classes have a clearly negative balance: more wage competition, more pressure on housing and more competition for public services. By contrast, part of the upper classes may have a positive balance, especially when they can transform population or labour-force growth into private income.

- Labour-intensive employers.
- Real-estate owners.
- Service sectors.
- Platforms and large distributors.
- Urban elites able to insulate themselves from local costs.

This is the phase in which the statement “GDP rises” may be true but insufficient: aggregate growth does not identify who captures the increase in income and who bears its distributive costs.

Phase 2. Erosion of the middle classes. Costs are no longer limited to low wages: housing, taxation, professional competition and service saturation put pressure on middle classes.

The costs then move upward toward the middle classes. They no longer affect only low-skilled workers. They may also affect groups that depend on the local housing market, professional demand or public services.

- Self-employed workers.
- Small businesses.
- Local professionals.
- Educated young adults.
- Renting middle classes.
- Civil servants and public-service workers under strain.

At this point the middle-class balance becomes ambiguous or negative. It may obtain some benefits —such as cheaper consumption, greater demand or more accessible personal services— while also facing more expensive housing, fiscal pressure, transformation of urban environments and professional competition. For this reason, the middle-class balance is especially contingent.

Phase 3. Replacement of positions. New groups may displace commercial, professional, business or political positions previously occupied by native groups.

In the long term, replacement does not necessarily affect only the lower classes. The local bourgeoisies themselves may also be replaced, understood not as an automatic mechanism but as a possibility when the process is sufficiently intense, persistent and capable of creating its own economic and institutional networks.

- Commercial replacement.
- Business replacement.
- Professional replacement.
- Real-estate replacement.

- Demographic replacement.
- Political replacement.
- Cultural replacement.

The local bourgeoisie may initially interpret immigration mainly as a source of labour or demand. Yet if the process is sufficiently intense, new economic groups, business networks, loyalties, commercial circuits and forms of social power may emerge and contest or displace positions held by the traditional native bourgeoisie.

> *The local upper class may believe that it is managing the process, but in the long run it may discover that it too is being managed, replaced or displaced by it.*

Phase 4. General systemic cost. When the process is massive and persistent, the initial private benefit may become a systemic cost: more fragmentation, less trust and greater instability.

In the final phase, the problem ceases to be merely distributive and becomes systemic. Costs are no longer limited to the three most immediate material channels —wages, housing and public services— but may extend to the conditions that make economic and institutional cooperation possible.

- Social trust.
- Institutional continuity.
- Security.
- Cultural cohesion.
- Governability.
- Political legitimacy.
- Reproduction of local elites.

At this point, even upper classes may cease to have a positive balance. They may still retain partial private benefits, but accumulated systemic costs may exceed them.

12.1. Synthetic formulation of the process

A strong formulation of the four phases as a whole would be:

> *The static model shows that, in the short term, immigration may benefit certain sectors of capital while harming mainly native popular classes. The dynamic model adds that this elite benefit is not necessarily permanent. If immigration becomes massive, persistent and substitutive, the process may also erode the middle classes, then local bourgeoisies and finally the stability of the system that allowed elites to capture benefits. The balance may therefore evolve from an initial private gain toward a general systemic loss.*

13. Table of replacement of positions and local bourgeoisies

Field	Potentially affected positions	Replacement mechanism
Commercial	Small business, local distribution and hospitality.	New commercial circuits and ownership changes.

Field	Potentially affected positions	Replacement mechanism
Professional	Self-employed workers, technicians and local professionals.	More competition and reordering of occupational segments.
Real-estate	Local owners, residential access and land control.	Ownership changes, rents and neighbourhood patterns.
Business	Petty bourgeoisies and family firms.	Entry of new capital networks and intermediaries.
Political and institutional	Local elites and political brokers.	New pressure blocs, institutional demand and loyalty shifts.
Cultural and symbolic	Social reproduction of local ruling groups.	Erosion of continuities and shared codes.

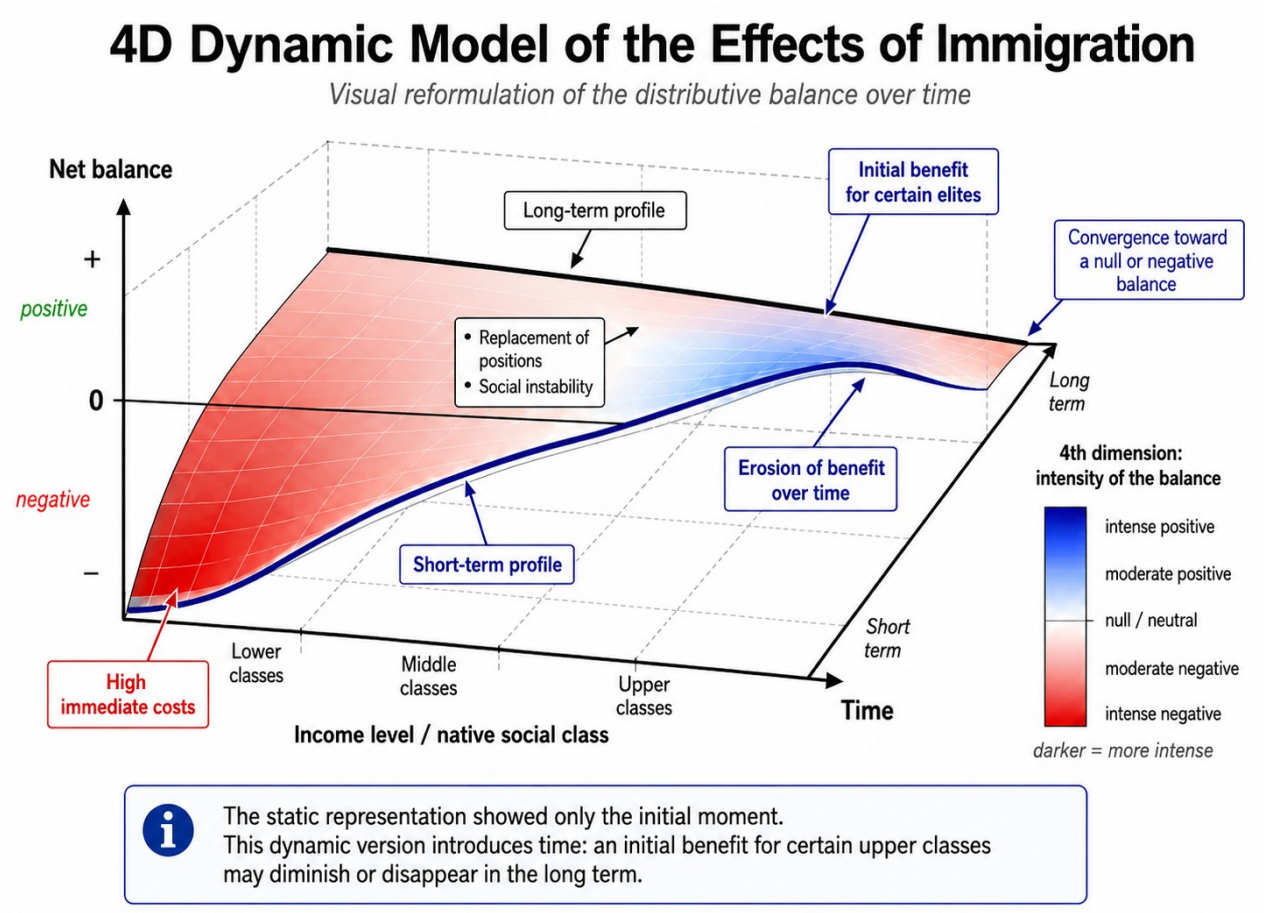

Figure 2. 4D dynamic model: visual reformulation of the distributive balance over time.

14. Guided reading of the 4D chart

The short-term profile shows a line rising from a strongly negative balance among lower classes to a slightly positive zone among upper classes. This is the moment at which certain elites may benefit.

The long-term profile is lower: the benefit erodes. The coloured surface indicates that, as time and process intensity increase, the positive zone shrinks and tends to converge toward a neutral or negative balance. The annotations concerning “replacement of positions” and “social instability” express the theoretical mechanism of that decline.

15. Synthetic formalization of the model

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SMC_(c,t) = B_labour + B_real-estate + B_consumption + B_fiscal − C_wage − C_housing − C_services − C_fiscal − C_replacement − C_instability

For lower classes: B ≈ 0 and C > 0  →  SMC < 0

For certain upper classes in the short term: B > C  →  SMC > 0

For certain upper classes in the long term, if R and I rise: C_replacement + C_instability > B  →  SMC ≤ 0
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15.1. Expanded formula for the dynamic balance

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NetBalance_(c,t) = B_labour + B_real_estate + B_consumption + B_fiscal − C_wage − C_housing − C_services − C_cohesion − C_replacement − C_instability

For lower classes: B ≈ 0; C > 0; therefore NetBalance < 0.

For upper classes in the short term: B > C; therefore NetBalance > 0.

For upper classes in the long term: C_replacement + C_instability + C_displacement > B; therefore NetBalance ≤ 0.
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15.2. Explanation of the model's formalization

The model can be summarized in three propositions. First, the impact of immigration is not homogeneous but distributive. Second, the distributive balance depends on class position, because each class has a different exposure to costs and a different capacity to capture benefits. Third, the balance is not fixed but temporal; it may change sign over time.

For native lower classes, the model therefore predicts very small direct benefits and high costs. This does not mean that every immigrant harms every lower-class native individual, but that a migratory regime that is unplanned and concentrated in low-income profiles tends to produce competition in the material spaces where these classes were already under strain.

For middle classes, the balance is more contingent. It depends on property ownership, professional sector, neighbourhood, age, dependence on public services and mobility capacity. A property-owning middle-class household may gain from real-estate appreciation and lose from environmental degradation; a renting middle-class household may lose through housing; a professional may gain from demand and lose from competition or fiscal pressure. Its balance is, by definition, unstable.

For upper classes, the initial balance may be positive, but the dynamic model introduces a condition: that balance is maintained only if systemic costs do not grow faster than private benefits. In other words, the upper-class benefit may be real yet potentially self-destructive if it depends on a process that erodes the social conditions that make its own reproduction possible.

15.3. Condition for dynamic deterioration

When the accumulated costs of replacement, institutional tension and instability exceed the initial private benefits, the balance of the upper classes moves from positive to neutral or negative.

$$C_{replacement} + C_{instability} + C_{displacement} > B_{private} \rightarrow NetBalance_{upper} \leq 0$$

16. Comparative scenarios

Scenario	Characteristics	Likely distributive outcome
Scenario A: moderate and complementary	Limited flows, high labour insertion, contained fiscal cost.	Elite balance may remain positive and the rest becomes less negative.
Scenario B: intense and unequal	Large low-income component, rigid housing supply, strained services.	The negative balance of popular and middle classes worsens.
Scenario C: massive and persistent	Endogenous reproduction, institutional change and replacement of positions.	The initial gain of certain elites shrinks or disappears.
Scenario D: substitutive	New groups occupy relevant commercial, professional or political spaces.	Balance converges toward neutral or negative even for local elites.

17. Falsifiability and required data

The model is testable. It could be falsified if the data showed that popular classes systematically capture greater net benefits than upper classes, or if housing, wage and service costs did not correlate with the type and magnitude of migratory inflows.

Testing it would require, among other things, data on wages by occupational segment, housing prices by neighbourhood, use of public services, net fiscal balance by cohort, intergenerational social mobility, ownership changes, and the composition of commercial and professional fabrics.

17.1. Limits, falsifiability and responsible use of the model

This model is conceptual and essayistic. It does not replace empirical analysis; it provides an architecture for organizing it. To turn it into a quantitative model, one would need to measure wages by decile, rental prices, use of public services, fiscal balance by profile, changes in ownership, territorial concentration, social mobility, crime, institutional trust and business or professional replacement. Without data, the model is an ordering hypothesis; with data, it could become a comparative tool across countries, cities and periods.

A morally simplistic reading should also be avoided. The model does not claim that immigrants themselves are to blame for the costs that may arise. Immigrants are often workers with little power, used within an economic regime that places them in competition with other workers. Primary responsibility lies with institutions, the productive structure, housing policy, the design of the welfare state and the economic interests that decide or promote certain flows without bearing their costs.

The falsifiability of the model requires asking when it does not hold. It may fail if immigration is highly skilled, fiscally positive, territorially balanced, culturally integrated, institutionally planned and non-substitutive. It may also fail in societies with abundant housing, very robust public services, protected wages and an economic structure able to absorb population without degrading wages or access to essential goods.

The model is therefore not a universal law against all immigration. It is a theory of the distributive and temporal risks of a certain type of migratory process: massive, persistent, concentrated, relatively low-income, weakly integrated and used by sectors of capital to expand labour supply or real-estate rents. This precision is necessary to avoid turning an analytical tool into a slogan.

18. Political-economy implications

The first implication is that looking only at aggregate GDP is insufficient. An economy may grow while the relative position of workers, renters or users of public services deteriorates.

The second implication is class-based: political preferences regarding immigration may reflect different material interests. Those who can externalize costs and privatize benefits perceive the phenomenon differently from those who bear the costs on the front line.

The third implication is temporal: what is profitable in the short term for some sectors may be destructive in the long term if it erodes the social and institutional foundations that sustain economic activity.

18.1. Development of the political and economic implications

The first implication is that the immigration debate cannot be resolved through a simple moral opposition between openness and closure. The central issue is the regime through which costs and benefits are distributed. A model that concentrates costs in popular neighbourhoods and benefits in capital is not neutral, even if it is expressed in humanitarian or cosmopolitan language. The relevant question is not only how much immigration arrives, but who needs it, who decides it, who integrates it, who pays the costs and who receives the rents.

The second implication is that aggregate-GDP discourse may function as a screen. Saying that GDP rises does not answer whether real wages rise, whether access to housing worsens, whether GDP per capita improves, whether public services can absorb the increase in demand, or whether social cohesion is maintained. An economy can become larger and less liveable for a substantial part of its population.

The third implication is that popular classes may have a more negative perception not because they are necessarily less moral, but because they are the first to experience the material costs of the process. The model makes it possible to interpret this sensitivity as a class response: someone who lives from wages, rent-constrained housing and public services has a radically different exposure from someone who lives from capital, property or mobility.

The fourth implication is that elites should also be analysed over time. It is not enough to say that they gain; one must ask for how long and under what conditions. An upper class that maximizes short-term benefits may be weakening the social framework that makes its own long-term stability possible. The model therefore introduces a critique not only from below, but also from the standpoint of systemic prudence.

19. Conclusion

The proposed model defends a distributive and temporal reading of immigration. In its static version, it shows that native lower and working classes tend to bear more costs and capture fewer benefits than upper classes. In its dynamic version, it shows that the initial gains of certain elites are not necessarily permanent.

Immigration is not only a demographic phenomenon; it is also a distributive one. Its analysis requires distinguishing aggregate magnitudes from class balances. A society may grow in population and GDP while part of its popular classes lose purchasing power, access to housing, service quality and continuity of their social environments. In this sense, the static model reveals an initial asymmetry: native lower and working classes tend to have little to gain and much to lose, while certain elites may have much to gain and relatively little to lose in the short term.

But the dynamic model adds a deeper thesis: the initial gains of elites are not necessarily stable. If the migratory process becomes massive, persistent and substitutive, costs may climb from lower classes to middle classes and, eventually, to the local bourgeoisies themselves. The result may be an erosion of the initial benefit and convergence toward a neutral or negative balance even for groups that initially appeared to benefit.

The key is to understand the transition from private benefit to systemic cost. A firm may gain from lower wages; a property owner may gain from higher rents; a wealthy consumer may gain from cheaper services. But if the sum of these private gains destroys cohesion, stability, trust, institutional continuity and social reproduction, the system as a whole may lose. What appeared rational for one class fraction in the short term may then become irrational for society as a whole in the long term.

The proposed model does not seek to close the debate, but to structure it. It makes possible a more precise question: not whether immigration is good or bad in the abstract, but what type of immigration, at what volume, with what labour structure, with what fiscal balance, in what territory, under what housing policy, with what integration capacity and with what effects on each native social class over time. This is the question that rigorous political economy should place at the centre.

Immigration may be a private short-term benefit and, at the same time, a long-term social cost. The 4D dynamic model makes this transformation visible: from the initial capture of gains to the progressive erosion of the balance of all classes, including those that initially appeared protected.

Thus, immigration does not divide only between “natives” and “immigrants”, but also between classes that capture benefits and classes that bear costs. In the long run, if the process is very intense and substitutive, even sectors that initially benefit may see their balance deteriorate.

20. Final dictionary of variables and concepts

Concept	Definition
Net migratory balance	Balance between benefits and costs for a given social group.
Benefit capture	Capacity to convert the phenomenon into income, cost savings, real-estate value or market advantage.
Exposure to costs	Degree to which a group suffers wage competition, housing inflation, service saturation or fiscal pressure.
Replacement of positions	Progressive displacement of economic, professional or political groups by other incoming or emerging groups.
Balance intensity	Relative strength of the positive or negative character of the balance, represented by colour in the 4D chart.